Filing Date: August 17, 2001 Title: SYSTEM AND METHOD OF IP PACKET FORWARDING ACROSS DIRECTLY CONNECTED FORWARDING ELEMENTS Assignee: Intel Corporation

REMARKS

This paper responds to the Office Action mailed on September 16, 2005.

Claims 1, 4-8, 11, 12, 14-16, 18, 19, 21-28 are amended. Claims 9, 10, and 13 are canceled without disclaimer or prejudice. As a result, claims 1-8, 11, 12, 14-30 are now pending in this application.

§112 Rejection of the Claims

Claims 4 and 5 were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Applicant respectfully traverses. Applicant believes that claims 4 and 5, as amended, particularly point out and distinctly claim the subject matter which Applicant regards as the subject matter of the invention.

\$102 Rejection of the Claims

Claims 9, 10, and 13 were rejected under 35 USC § 102(e) as being anticipated by Andersson et al. (U.S. 6,449,275, hereinafter Andersson).

Claims 9, 10, and 13 are canceled without disclaimer and prejudice.

Claims 16-21 were rejected under 35 USC § 102(e) as being anticipated by Jennings et al. (U.S. 6.807.175 hereinafter Jennings).

Applicant respectfully traverses for at least the reasons presented below.

Regarding independent claim 16, Applicant is unable to find in Jennings each of the things recited in claim 16. For example, Applicant is unable to find in Jennings "applying a switch-label to at least one packet, wherein the switch-label is generated upon a receipt of the packet, wherein the switch-label uniquely identifies an address within a router in which the address is an address of a port/next-hop on an egress-forwarding element within the router, wherein the egress-forwarding element is one of a plurality of forwarding elements within the router", and transferring the packet between the plurality of forwarding elements via the switched backplane/interconnect, wherein the switch-label is applied to the packet "before" the Filing Date: August 17, 2001 Title: SYSTEM AND METHOD OF IP PACKET FORWARDING ACROSS DIRECTLY CONNECTED FORWARDING ELEMENTS Assignee: Intel Corporation

packet is transferred to the switched backplane/interconnect. Thus, Applicant believes that claim 16 is not anticipated by Jennings. Dependent claims 17 and 18 depend from claim 16 and recite the things of claim 16. Thus, Applicant believes that claims 17 and 18 are not anticipated by Jennings for reasons at least similar to those presented herein regarding claim 16, and for the additional things recited in claims 17 and 18. Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claims 16-18.

Regarding independent claim 19, Applicant is unable to find in Jennings each of the things recited in claim 19. For example, Applicant is unable to find in Jennings "applying a switch-label to at least one packet, wherein the switch-label is generated upon receipt of the packet, wherein the switch-label uniquely identifies an address within a router, wherein the address is an address of a port/next-hop on an egress-forwarding element within the router, wherein the egress-forwarding element is one of a plurality of forwarding elements within the router, wherein the forwarding elements are operably coupled to each other through a transfer connection", and transferring the packet between the plurality of forwarding elements via the transfer connection, "wherein the switch-label is applied to the packet before the packet is transferred to the transfer connection". Thus, Applicant believes that claim 19 is not anticipated by Jennings. Dependent claims 20 and 21 depend from claim 19 and recite the things of claim 19. Thus, Applicant believes that claims 20 and 21 are also not anticipated by Jennings for reasons at least similar to those presented herein regarding claim 19, and for the additional things recited in claims 20 and 21. Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claims 19-21.

§103 Rejection of the Claims

Claims 1-4 and 6-7 were rejected under 35 USC § 103(a) as being unpatentable over Jennings et al. (U.S. 6,807,175) in view of Bakke et al. (U.S. 5,566,170, hereinafter Bakke).

Applicant respectfully traverses for at least the reasons presented below.

Regarding independent claim 1, Applicant is unable to find a motivation to combine the teachings of Jennings and Bakke, as proposed by the Office Action, to achieve the things recited in claim 1. Applicant is also unable to find in Jennings and Bakke each of the things recited in claim 1. For example, Applicant is unable to find in Jennings and Bakke, whether considered

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individually or in the proposed combination, "the validating a header, the decrementing a timeto-live, the recalculating a second checksum, and the performing a route lookup are performed only once for the packet during transfer among a plurality of ports within a router, wherein the validating a header, the decrementing a time-to-live, the recalculating a second checksum, and the performing a route lookup are performed before the packet is transferred to a switched interconnect/backplane of the router". Thus, Applicant believes that claim 1 is patentable over Jennings and Bakke, whether considered individually or in the proposed combination. Dependent claims 2-4 depend from claim 1 and recite the things of claim 1. Thus, Applicant believes that claims 2-4 are also patentable over Jennings and Bakke, whether considered individually or in the proposed combination, for reasons at least similar to those presented herein regarding claim 1, and for the additional things recited in claims 2-4. Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claims 1-4.

Regarding independent claim 6, Applicant is unable to find a motivation to combine the teachings of Jennings and Bakke, as proposed by the Office Action, to achieve the things recited in claim 6. Applicant is also unable to find in Jennings and Bakke each of the things recited in claim 6. For example, Applicant is unable to find in Jennings and Bakke, whether considered individually or in the proposed combination, "the validating action, the decrementing action and the recalculating action are performed only once for the packet during transfer among a plurality of ports within a router, and wherein the validating action, and the recalculating action are performed by only one port of the plurality of ports of the route and are performed before the packet is transferred to a switched interconnect/backplane of the router". Thus, Applicant believes that claim 6 is patentable over Jennings and Bakke, whether considered individually or in the proposed combination. Dependent claim 7 depends from claim 6 and recites the things of claim 6. Thus, Applicant believes that claim 7 is also patentable over Jennings and Bakke, whether considered individually or in the proposed combination, for reasons at least similar to those presented herein regarding claim 6, and for the additional things recited in claim 7. Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claims 6 and 7.

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Claims 5 and 8 were rejected under 35 USC § 103(a) as being unpatentable over Jennings et al. (U.S. 6,807,175 in view of Bakke et al. (U.S. 5,566,170) as applied to claims 1 and 6 above, and further in view of Andersson et al. (U.S. 6,449,275).

Applicant respectfully traverses for at least the reasons presented below.

Dependent claim 5 depends from claim 1 and recites the things of claim 1. Thus, Applicant believes that claim 5 is also patentable over Jennings and Bakke, whether considered individually or in the proposed combination, for reasons at least similar to those presented herein regarding claim 1, and for the additional things recited in claims 5. Applicant also believes that claim 5 is also patentable over Jennings, Bakke, and Andersson, whether considered individually or in the proposed combination, for reasons at least similar to those presented herein regarding claim 1, and for the additional things recited in claim 5. Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 5.

Dependent claim 8 depends from claim 6 and recites the things of claim 6. Thus, Applicant believes that claim 8 is also patentable over Jennings and Bakke, whether considered individually or in the proposed combination, for reasons at least similar to those presented herein regarding claim 6, and for the additional things recited in claims 8. Applicant also believes that claim 8 is also patentable over Jennings, Bakke, and Andersson, whether considered individually or in the proposed combination, for reasons at least similar to those presented herein regarding claim 6, and for the additional things recited in claim 8. Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 8.

Claims 22-30 were rejected under 35 USC § 103(a) as being unpatentable over Jennings et al. (U.S. 6,807,175 in view of Andersson et al. (U.S. 6,449,275).

Applicant respectfully traverses for at least the reasons presented below.

Regarding independent claim 22, Applicant is unable to find a motivation to combine the teachings of Jennings and Andersson, as proposed by the Office Action, to achieve the things recited in claim 22. Applicant is also unable to find in Jennings and Andersson each of the things recited in claim 22. For example, Applicant is unable to find in Jennings and Andersson, whether considered individually or in the proposed combination, "a plurality of forwarding elements coupled to a switched interconnect/backplane, each of the forwarding elements to

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maintain a rout lookup table to contain addresses associated with the packets entering the forwarding elements, and a switch-label entry table in each of the forwarding elements to contain labels associated with the packets transferred internally among the forwarding elements via the switched interconnect/backplane, wherein the labels associated with the packets are generated before the packets are transferred internally through the switched interconnect/backplane".

Thus, Applicant believes that claim 22 is patentable over Jennings and Andersson, whether considered individually or in the proposed combination. Dependent claims 23 and 24 depend from claim 22 and recite the things of claim 22. Thus, Applicant believes that claims 23 and 24 are also patentable over Jennings and Andersson, whether considered individually or in the proposed combination, for reasons at least similar to those presented herein regarding claim 22, and for the additional things recited in claims 23 and 24. Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claims 22-24.

Regarding independent claim 25, Applicant is unable to find a motivation to combine the teachings of Jennings and Andersson, as proposed by the Office Action, to achieve the things recited in claim 25. Applicant is also unable to find in Jennings and Andersson each of the things recited in claim 25. For example, Applicant is unable to find in Jennings and Andersson, whether considered individually or in the proposed combination, "a plurality of forwarding elements, each of the forwarding elements to maintain a switch-label entry table to contain labels associated with packets transferred among the forwarding elements", and a switch-label table manager that generates the switch-label table for each of the forwarding elements, "wherein labels associated with packets are generated before the packets are transferred among the forwarding elements through the switched interconnect/backplane". Thus, Applicant believes that claim 25 is patentable over Jennings and Andersson, whether considered individually or in the proposed combination. Dependent claims 26-30 depend from claim 25 and recite the things of claim 25. Thus, Applicant believes that claims 26-30 are also patentable over Jennings and Andersson, whether considered individually or in the proposed combination, for reasons at least similar to those presented herein regarding claim 25, and for the additional things recited in claims 26-30. Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claims 25-30

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Allowable Subject Matter

Claims 11-12 and 14-15 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 11, 12, 14, and 15 are rewritten in independent form as suggested by the Office Action. The rewriting does not alter the scope of claims 11, 12, 14, and 15. Thus, claims 11, 12, 14, and 15 are now in condition for allowance.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's representative ((612) 373-6969) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date of Deposit: March 16, 2006

This paper or fee is being filed on the date indicated above, using the USPTO's electronic filing system EFS-Web, and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.